

the first epitope and the second epitope are different.

21. (New) The method of claim 20, wherein at least one of the first and the second antibodies comprises a label, and wherein the method further comprises detecting a signal emitted from the label.

22. (New) The method of claim 20 wherein the first and the second antibodies bind simultaneously to the N-terminal proBNP.

23. (New) The method of claim 20 wherein the detecting is performed by a heterogeneous test procedure.

24. (New) The method of claim 21 wherein the detecting is performed by a heterogeneous test procedure.

25. (New) The method of claim 22 wherein the detecting is performed by a heterogeneous test procedure.

26. (New) The method of claim 23 wherein the test procedure involves a sandwich assay.

27. (New) The method of claim 24 wherein the test procedure involves a sandwich assay.

28. (New) The method of claim 25 wherein the test procedure involves a sandwich assay.

29. (New) The method of claim 20 wherein a lower detection limit for the N-terminal proBNP is less than 1 fmol/ml.

30. (New) The method of claim 21 wherein a lower detection limit for the N-terminal proBNP is less than 1 fmol/ml.

31. (New) The method of claim 22 wherein a lower detection limit for the N-terminal proBNP is less than 1 fmol/ml.

32. (New) The method of claim 23 wherein a lower detection limit for the N-terminal proBNP is less than 1 fmol/ml.

33. (New) The method of claim 24 wherein a lower detection limit for the N-terminal proBNP is less than 1 fmol/ml.

34. (New) The method of claim 25 wherein a lower detection limit for the N-terminal proBNP is less than 1 fmol/ml.

35. (New) The method of claim 26 wherein a lower detection limit for the N-terminal proBNP is less than 1 fmol/ml.

36. (New) The method of claim 27 wherein a lower detection limit for the N-terminal proBNP is less than 1 fmol/ml.

37. (New) The method of claim 28 wherein a lower detection limit for the N-terminal proBNP is less than 1 fmol/ml.

38. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:

identifying an amount of N-terminal proBNP in a sample under study using the method of claim 20; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

39. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:

identifying an amount of N-terminal proBNP in a sample under study using the method of claim 21; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

40. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:

identifying an amount of N-terminal proBNP in a sample under study using the method of claim 22; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

41. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:
identifying an amount of N-terminal proBNP in a sample under study using the method of claim 23; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

42. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:
identifying an amount of N-terminal proBNP in a sample under study using the method of claim 24; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

43. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:
identifying an amount of N-terminal proBNP in a sample under study using the method of claim 25; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

44. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:
identifying an amount of N-terminal proBNP in a sample under study using the method of claim 26; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

45. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:
identifying an amount of N-terminal proBNP in a sample under study using the method of claim 27; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

46. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:

identifying an amount of N-terminal proBNP in a sample under study using the method of claim 28; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

47. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:

identifying an amount of N-terminal proBNP in a sample under study using the method of claim 29; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

48. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:

identifying an amount of N-terminal proBNP in a sample under study using the method of claim 30; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

49. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:

identifying an amount of N-terminal proBNP in a sample under study using the method of claim 31; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

50. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:

identifying an amount of N-terminal proBNP in a sample under study using the method of claim 32; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

51. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:

identifying an amount of N-terminal proBNP in a sample under study using the method of claim 33; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

52. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:

identifying an amount of N-terminal proBNP in a sample under study using the method of claim 34; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

53. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:

identifying an amount of N-terminal proBNP in a sample under study using the method of claim 35; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

54. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:

identifying an amount of N-terminal proBNP in a sample under study using the method of claim 36; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

55. (New) A method of differentiating a sample taken from a healthy patient and a sample taken from a patient with a type of heart failure, comprising:

identifying an amount of N-terminal proBNP in a sample under study using the method of claim 37; and

correlating the amount of N-terminal proBNP identified in the sample under study with a level of N-terminal proBNP characteristic of a healthy patient or a patient with a type of heart failure;

wherein the type of heart failure is selected from the group consisting of NYHA Class I, NYHA Class II, NYHA Class III, and NYHA Class IV.

56. (New) The method of claim 38 wherein the type of heart failure is NYHA Class I.

57. (New) The method of claim 39 wherein the type of heart failure is NYHA Class I.

58. (New) The method of claim 40 wherein the type of heart failure is NYHA Class I.

59. (New) The method of claim 41 wherein the type of heart failure is NYHA Class I.

60. (New) The method of claim 42 wherein the type of heart failure is NYHA Class I.

61. (New) The method of claim 43 wherein the type of heart failure is NYHA Class I.

62. (New) The method of claim 44 wherein the type of heart failure is NYHA Class I.

63. (New) The method of claim 45 wherein the type of heart failure is NYHA Class I.

64. (New) The method of claim 46 wherein the type of heart failure is NYHA Class I.

65. (New) The method of claim 47 wherein the type of heart failure is NYHA Class I.

66. (New) The method of claim 48 wherein the type of heart failure is NYHA Class I.

67. (New) The method of claim 49 wherein the type of heart failure is NYHA Class I.

68. (New) The method of claim 50 wherein the type of heart failure is NYHA Class I.
69. (New) The method of claim 51 wherein the type of heart failure is NYHA Class I.
70. (New) The method of claim 52 wherein the type of heart failure is NYHA Class I.
71. (New) The method of claim 53 wherein the type of heart failure is NYHA Class I.
72. (New) The method of claim 54 wherein the type of heart failure is NYHA Class I.
73. (New) The method of claim 55 wherein the type of heart failure is NYHA Class I.
74. (New) A recombinant N-terminal proBNP.
75. (New) The method of claim 20 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.
76. (New) The method of claim 21 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.
77. (New) The method of claim 22 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.
78. (New) The method of claim 23 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.
79. (New) The method of claim 24 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.
80. (New) The method of claim 25 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

81. (New) The method of claim 26 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

82. (New) The method of claim 27 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

83. (New) The method of claim 28 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

84. (New) The method of claim 29 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

85. (New) The method of claim 30 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

86. (New) The method of claim 31 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

87. (New) The method of claim 32 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

88. (New) The method of claim 33 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

89. (New) The method of claim 34 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

90. (New) The method of claim 35 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

91. (New) The method of claim 36 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

92. (New) The method of claim 37 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

93. (New) The method of claim 38 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

94. (New) The method of claim 39 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

95. (New) The method of claim 40 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

96. (New) The method of claim 41 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

97. (New) The method of claim 42 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

98. (New) The method of claim 43 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

99. (New) The method of claim 44 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

100. (New) The method of claim 45 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

101. (New) The method of claim 46 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

102. (New) The method of claim 47 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

103. (New) The method of claim 48 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

104. (New) The method of claim 49 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

105. (New) The method of claim 50 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

106. (New) The method of claim 51 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

107. (New) The method of claim 52 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

108. (New) The method of claim 53 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

109. (New) The method of claim 54 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

110. (New) The method of claim 55 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

111. (New) The method of claim 56 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

112. (New) The method of claim 57 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

113. (New) The method of claim 58 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

114. (New) The method of claim 59 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

115. (New) The method of claim 60 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

116. (New) The method of claim 61 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

117. (New) The method of claim 62 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

118. (New) The method of claim 63 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

119. (New) The method of claim 64 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

120. (New) The method of claim 65 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

121. (New) The method of claim 66 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

122. (New) The method of claim 67 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

123. (New) The method of claim 68 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

124. (New) The method of claim 69 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

125. (New) The method of claim 70 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

126. (New) The method of claim 71 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

127. (New) The method of claim 72 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

128. (New) The method of claim 73 further comprising quantifying the N-terminal proBNP identified in the sample against a standard comprised of recombinant N-terminal proBNP.

129. (New) A method of producing antibodies against N-terminal proBNP comprising:

immunizing an organism with recombinant N-terminal proBNP; and
isolating the antibodies from the organism.

130. (New) An antibody against recombinant N-terminal proBNP.

131. (New) The antibody of claim 130 wherein the antibody specifically binds N-terminal proBNP in a range between amino acids 10 to 66.

132. (New) An antibody against recombinant N-terminal proBNP produced by immunizing an organism with recombinant N-terminal proBNP.

133. (New) The antibody of claim 132 wherein the antibody specifically binds N-terminal proBNP in a range between amino acids 10 to 66.

134. (New) The antibody of claim 130 produced by a cell line selected from the group consisting of M 10.1.11, M 13.4.14, and a combination thereof.

135. (New) The antibody of claim 131 produced by a cell line selected from the group consisting of M 10.1.11, M 13.4.14, and a combination thereof.

136. (New) An antibody against recombinant N-terminal proBNP produced by immunizing an organism with recombinant N-terminal proBNP, wherein the antibody thus produced is equivalent to an antibody against recombinant N-terminal proBNP produced by a cell line selected from the group consisting of M 10.1.11, M 13.4.14, and a combination thereof.

137. (New) Cell line M 10.1.11.

138. (New) Cell line M 13.4.14.

139. (New) A method of producing polyclonal antibodies against recombinant N-terminal proBNP comprising:

immunizing an organism with recombinant N-terminal proBNP;

isolating the antibodies from the organism;

screening the antibodies for reactive epitopes; and

purifying the antibodies by immunosorption.

140. (New) A method of producing monoclonal antibodies against recombinant N-terminal proBNP comprising:

immunizing an organism with recombinant N-terminal proBNP; and

selecting clones according to reactivity between the antibodies and native

N-terminal proBNP in different pools of patient sera.

SUPPORT FOR NEW CLAIMS

New claims 20-140 are supported by the description in the specification and by original claims 1 to 19. No new matter has been added. Upon entry of this amendment, claims 20-140 are present and active in the application.